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How do other people influence your driving speed? Exploring the 'who' and the 'how' of social influences on speeding from a qualitative perspective.

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ABSTRACT

Using only legal sanctions to manage the speed at which people drive ignores the potential benefits of harnessing social factors such as the influence of others. Social influences on driving speeds were explored in this qualitative examination of 67 Australian drivers. Focus group interviews with 8 driver types (young, mid-age and older males and females, and self-identified Excessive and Rare speeders) were guided by Akers' social learning theory (Akers, 1998). Findings revealed two types of influential others: people known to the driver (passengers and parents), and unknown other drivers. Passengers were generally described as having a slowing influence on drivers: responsibility for the safety of people in the car and consideration for passenger comfort were key themes. In contrast, all but the Rare speeders reported increasing their speed when driving alone. Parental role modelling was also described. In relation to other drivers, key themes included speeding to keep up with traffic flow and perceived pressure to drive faster. This 'pressure' from others to 'speed up' was expressed in all groups and reported strategies for managing this varied. Encouragingly, examples of actual or anticipated social rewards for speeding were less common than examples of social punishments. Three main themes relating to social punishments were embarrassment, breaching the trust of others, and presenting an image of a responsible driver. Impression management and self-presentation are discussed in light of these findings. Overall, our findings indicate scope to exploit the use of

social sanctions for speeding and social praise for speed limit compliance to enhance speed management strategies.

Keywords: speeding; Akers' social learning theory; deterrence; road safety; normative influence; self-presentation; impression management

1 INTRODUCTION

Drivers rarely operate in isolation; rather they share the road and the vehicle with others. Driving has been described as a socially regulated behaviour (see a review by Stradling, 2007) and speeding, a high-risk yet common behaviour, has received attention from social psychologists in an effort to better understand it. Previous research on the influence of others on driving speeds has canvassed a broad range of factors. Passengers have been found to play both protective and detrimental roles in influencing risky driving (including speeding), depending on the age and gender of driver and passenger (Conner, Smith, & McMillan, 2003; Regan & Mitsopoulos, 2001). Normative influences have also been studied; how driver perceptions of the beliefs, attitudes, and actions of important others towards speeding can influence driving speeds (for examples see Conner et al., 2003; B. Elliott, 2001; M. A. Elliott, Armitage, & Baughan, 2005; Fleiter, Watson, Lennon, & Lewis, 2006; Forward, 2006, 2009; Letirand & Delhomme, 2005; Parker, Manstead, Stradling, Reason, & Baxter, 1992; Warner & Aberg, 2006, 2008). To a lesser extent, research has considered how the social traffic environment can influence driving speeds.

The social nature of traffic environments refers to our interactions with other road users. Perceptions about the speed of other vehicles appear influential in speed selection (Hagland &

Aberg, 2000). Connelly and Aberg (1993) described the social comparison or contagion model of speeding which suggests we adopt a speed according to comparisons made with the speed of others on the road. Research examining this proposition has indicated that the majority of participants overestimated the speed of other drivers, stated that they wished to drive like other drivers, and reported that other drivers would believe they were driving too slowly (Aberg, Larsen, Glad, & Beilinsson, 1997). This suggests that the mere presence of other drivers on the road can influence driver perceptions and potentially therefore, their driving speeds.

Taken together, the findings cited above demonstrate the potential of other people to influence driving speeds. However, in the quest to reduce road trauma linked to excessive speeds, authorities continue to rely almost exclusively on legal sanctions such as monetary fines and demerit point penalties to regulate speeds and modify driver behaviour (Fildes, Langford, Andrea, & Scully, 2005; Groeger & Chapman, 1997). While this approach is not without success, little attention has been paid to harnessing the influence of others in speed management (Hatfield & Job, 2006; Parker, Stradling, & Manstead, 1996).

This reliance on legal sanctions stems from traditional deterrence principles which focus on the perceived risk of apprehension and perceptions about the certainty, severity and swiftness of penalties if apprehended (Homel, 1988). For each driving episode, subjective beliefs about the likelihood of apprehension, together with judgments regarding potential legal penalties are proposed to determine the degree to which an individual is deterred. However, despite the intuitive appeal of this theory, research across a range of behaviours, including risky driving behaviours such as speeding and drink driving, suggests that such perceptions about legal

consequences do not necessarily deter behaviour and, in some cases, may actually do the opposite (see Fleiter & Watson, 2006; Freeman et al., 2006; Pogarsky & Piquero, 2003; Watson, 2004a).

Attempts to refine traditional deterrence principles have included the addition of vicarious learning; observing the behaviour of others (Stafford & Warr, 1993). Including the role of others in the deterrence equation acknowledges the importance of those around us in shaping behaviour. Additionally, research outside the road safety field has considered the role of extra-legal sanctions in modifying behaviour such as socially-based consequences which have been shown to exert independent and strong effects on the extent of deviant behaviour (for a review see Zimmerman, 2008).

Another theory used to examine social influence is the theory of planned behaviour (TPB) (Azjen, 1991). A key TPB concept is the *subjective norm*; beliefs about what important others would expect us to do, coupled with our motivation to comply with these expectations. This theory has been applied to better understand a range of road user behaviours including drink driving, dangerous overtaking, close following, speeding, and risky motorcycling (Parker et al., 1992; Stradling & Parker, 1997; Warner & Aberg, 2006; Watson, Tunnicliff, White, Schonfeld, & Wishart, 2007). However, it has been argued that the normative-intention relationship is the weakest part of the theory because of the narrow focus on the expectations of other people (B. Elliott, 2001; Terry, Hogg, & White, 2000). Additional components such as moral norm and group norms have been used to further investigate the realm of social influence in the TPB with some success (Godin, Conner, & Sheeran, 2005; Gordon & Hunt, 1998; Watson et al., 2007).

However, the TPB does not specifically encompass intrinsic factors such as emotion or arousal (Fylan, Hempel, Grunfeld, Connor, & Lawton, 2006). Furthermore, it appears to lack the ability to fully explain why enforcement influences our behaviour (Siegrist, 2004).

One theoretical approach to studying deviant behaviour that focuses strongly on social influence as well as on intrinsic and enforcement-related factors is Akers' social learning theory (SLT) (Akers, 1998). This theory emphasises the importance of the people and groups with whom we associate and posits that deviance and conformity are learned in the same way, with the balance of influence stemming from the way behaviour is punished and rewarded. This theory has been applied to understand a variety of deviant behaviours (see Akers & Jensen, 2003) and has been used in the road safety context to examine travelling as a passenger with a drinking driver (DiBlasio, 1988), and more recently, to speeding (Fleiter & Watson, 2006), and unlicensed driving (Watson, 2004b). Essentially, the role of other people is central to each of the theory's four components.

Firstly, *Imitation* refers to modelling the behaviour of others. Secondly, *Definitions*, refers to personal attitudes and moral beliefs about a behaviour which can be shaped over time by significant others. Thirdly, *Differential association* refers to our interactions with other people and has two distinct dimensions. The behavioural dimension relates to direct exposure to the behaviour of others via our associations and interactions with them. The normative dimension relates to our exposure to the values and norms of the people with whom we associate and interact. Finally, *Differential reinforcement* refers to the overall balance of anticipated/actual reinforcements (i.e., punishments and rewards) associated with a given behaviour with

reinforcements described as both social (e.g., praise, embarrassment) and non-social (e.g., anxiety, excitement) in nature. Overall, SLT emphasises exposure (direct and indirect) to the behaviours, attitudes, and norms of those with whom we mix as well as intrinsic and socially-based reinforcements. This theory offers a useful framework to investigate the impact of social influence on driving speeds as well as additional factors that are lacking in the more traditional theoretical approaches described above.

As noted above, research has demonstrated that legal and extra-legal sanctions or punishments can exert independent, significant effects on criminal behaviour (Zimmerman, 2008). Extra-legal sanctions can be self-imposed and result from behavioural performance that is known by the individual to be morally wrong (e.g., guilt). Alternatively, the sanction can be socially-imposed. An example of a socially-imposed sanction is the embarrassment associated with reactions from salient others when they become aware of the behaviour. Embarrassment has been described as an internal reaction arising from negative evaluation by others; one that is reliant upon a socialisation process where we come to understand that behaviour has social consequences (Edelmann, 1987; Miller & Leary, 1992). This has been linked to impression management theory and the concept of self-presentation (Bromley, 1993; Schlenker, 1980).

Impression management refers to 'the goal-directed activity of controlling information about some person, object, idea or event to audiences' whereas self-presentation relates specifically to 'the control of information about self' (Schlenker & Pontari, 2000, p. 201). Impression management theory proposes that we attempt to control the way others regard us by presenting some aspects of our behaviour and concealing others. The projection of an undesired impression

may result in negative social feedback leading to embarrassment. Therefore, people may be motivated to avoid self-presentational failures in order to avoid such feelings (Bell, 2009; Leary, Tchividjian, & Kraxberger, 1999). This concept is akin to social punishment as described by SLT.

The concepts of impression management and self-presentation have traditionally been viewed from the perspective of deception via socially desirable responding; 'annoying contaminants of research that obscured the more fundamental and important processes that were of major concern to researchers' (Schlenker & Pontari, 2000, p. 200). It has been argued that self-reported driving behaviours are particularly susceptible to bias from socially desirable responding and therefore, that researchers should take steps to control for such biases (Lajunen, Corry, Summala, & Hartley, 1997). More recently however, this argument for eliminating a social process (i.e., impression management) that may help us better understand social behaviour has been questioned (Schlenker & Pontari, 2000). Indeed, the relevance of self-presentational motives and actions may actually enhance, rather than hinder our understanding of social behaviour. For instance, self-presentational concerns have been linked to increases in health risks associated with skin cancer, HIV infection, and substance use (see Leary et al., 1999 for a review).

With respect to driving however, the influence of personal risks such as embarrassment from self-presentation failures are not well understood. Traditionally, traffic psychology has explored risk perceptions from the perspective of risks associated with crashes, injury, detection, and sanctions. Few investigations of the risk of damage to personal reputation or image and associated negative social feedback such as embarrassment have been conducted in the road

safety area. However, threats of embarrassment and shame have been linked to reductions in self-reported drink driving in a general community sample in the U.S.A. Legislative increases in penalties during the 1980s were accompanied by a 'moral crusade' aimed specifically at altering values and community beliefs about drink driving (Grasmick, Bursik, & Arneklev, 1993, p.41). Annual survey results indicated that community views had altered substantially during the decade and threats of shame and embarrassment were identified as significantly related to reductions in self-reported drink driving (Grasmick et al., 1993).

This example highlights the importance of changing community perceptions with the long term aim of reducing the perceived acceptance of the target behaviour. However, the efficacy of this approach might be limited with respect to 'high risk' offenders because the results discussed above relate to reductions in self-reported drink driving among a general community sample. By comparison, one of the few published studies to examine the influence of extra-legal sanctions on recidivist drink drivers in Australia revealed that loss of respect from friends was not a significant issue for repeat offenders (Freeman et al., 2006). Thus, the effects of altered public perceptions may only be relevant to those drivers who are not in the cycle of repeat offending or who do not place a large degree of importance on being seen as complying with the norm. Our knowledge of such issues as they relate to speeding is limited. Greater understanding of the interplay between self-presentation and embarrassment may prove useful in targeting areas for countermeasures development. These issues may be particularly relevant to younger drivers who are potentially most susceptible to peer appraisal and negative social consequences (Edelmann, 1998), although there is evidence to suggest that adults and adolescents are equally susceptible to such influences (Demo & Savin-Williams, 1992; Martin, Leary, & Rejeski, 2000).

Given the social nature of driving, the utility of social reinforcements to reduce speeding warrants further attention. A better understanding of such reinforcement mechanisms could help to broaden the scope of behaviour change strategies beyond the traditional legal countermeasures. Therefore, this study used a social learning theory (SLT) framework to guide the design and analysis. There were two research aims: 1) to examine what types of people exert an influence on another's driving speeds and in what way, and 2) to expand our knowledge about the role of social reinforcement in speeding[1].

A qualitative inquiry strategy was adopted because it offers an opportunity to gain a richer appreciation of issues than is possible with quantitative measures alone (Nagy Hesse-Biber & Leavy, 2006). Focus groups were selected as the research method because they offer a socially interactive setting for guided discussions where multiple views can be offered, debated, clarified, and challenged as discussion progresses (Morgan, 1998; Rothe, 2000). This socially interactive strategy seemed particularly relevant to the current research in light of the social nature of driving.

2 METHOD

2.1 Participants

Participants were asked to self-select into groups based on age and gender because these characteristics have previously been shown to be predictive of speeding (Fylan et al., 2006; McKenna, 2005; Roads and Traffic Authority, 2000). Thus, we anticipated variation in

[1] This study was conducted in Australia; a country that has relatively high speed limits compared to other countries, but quite extensive speed enforcement programs featuring automated and non-automated operations (Fildes et al., 2005).

responses between groups that would enrich the material derived from the study. Two additional categories were selected to further enhance variation in responses. These were based on self-reported speeding, irrespective of age and gender: either frequent intentional speeding by large amounts or rare cases of exceeding speed limits. In total, eight categories were used: 1 = young males, 2 = young females, 3 = mid-age males, 4 = mid-age females, 5 = older males, 6 = older females, 7 = Excessive speeders, and 8 = Rare speeders. Participants were invited to self-select into one group. Those who nominated for the two speed-related groups where screened via telephone in an attempt to ensure that these groups contained drivers with extremes in self-reported behaviour (i.e., excessive or rare speeding). For example, someone who occasionally drives at the speed of 110 km/hour in a 100 km/hour zone was not the type of driver sought for the Excessive speed group. Rather, we intended to recruit drivers who frequently exceeded speed limits by much more than 10km/hour. This information was not listed on recruitment notices. Therefore, it was necessary to make this assessment prior to confirming people in a speed-related group. Participants were asked to describe their general driving speeds on a range of roads during this initial phone contact. The first author conducted all screening calls to provide consistency of classification.

Purposeful sampling was used to recruit sixty-seven car drivers in the Australian state of Queensland in 2006[2]. Participants held either a Provisional or Open licence and were aged 17-77 years[3]. Appendix A contains information on group composition. Participants were recruited via advertising on public and university notice boards. First-year university students (*n*=34) were

[2] This research was conducted approximately twelve months prior to the introduction of fixed speed cameras in Queensland.
[3] A Provisional licence is an intermediate licence that is generally held for 3 years before progressing to a full (unrestricted) licence. The minimum age for attaining this licence is 17 years in Queensland.

offered course credit and community participants (*n*=33) were offered the chance to win an AUD30 shopping voucher for participating.

2.2 Materials and Procedure

Before each group commenced, participants provided demographic and driving history details. In line with University ethical research approval, participants gave written consent to participate and for discussions to be audio-recorded. In addition, each person was provided with written contact details for counselling assistance in the event that their participation caused unexpected psychological distress.

Groups were intentionally structured to be homogeneous in nature to encourage discussion amongst people with potentially similar beliefs. This strategy was seen as an important mechanism to strengthen validity by encouraging openness in responding (Nagy Hesse-Biber & Leavy, 2006). Additionally, participants were informed that all opinions were valued equally and that divergent views were welcome. A semi-structured interview format using open-ended questions was used, providing the opportunity for exploration on concepts of interest, as well as for free-flowing conversation amongst participants and expansion of ideas within group conversation (Patton, 2002). This strategy was chosen to optimise time spent with participants by balancing the need to elicit information on specific concepts with the desire for spontaneous conversations to develop. Questions were designed to operationalise each social learning theory component. Probes were used to extend discussions where relevant. Probing served three purposes: 1) it allowed additional information to be gained on key theoretical concepts; 2) it provided an opportunity for the facilitator to clarify ambiguous or unclear statements, thus enhancing understanding and minimising misinterpretations of the material; and 3) probing

questions were used to investigate important unanticipated topics that emerged (Bergman & Coxon, 2005). Questions and probes relevant to the findings reported in this paper are presented in Appendix B.

2.3 Analysis

The first author facilitated each group (60 - 90 minutes duration) and transcribed the discussions verbatim soon after their completion, allowing for analysis to occur simultaneously with ongoing collection of material. Thematic analysis using an interpretive framework was used. This is done by closely scrutinising participant responses to each question/topic area to identify themes that are common across groups as well as those that are unique to particular groups. Overall, transcripts were analysed keeping SLT concepts in mind while remaining as open as possible to emerging themes that did not fit within the theoretical framework. Analysis focussed on how participant comments could be categorised according to SLT's four key components. The identified themes were then compared across groups in a constant comparative approach that helped validate the researchers' appreciation of issues as analysis proceeded (Rennie, 2006). To enhance the validity of the first author's interpretations and identification of themes, the co-authors (experienced road safety researchers not present at the interviews) were consulted regularly to enable confirmation/clarification of themes. Familiar with the research aims, design, and theoretical underpinning, they were able to challenge, clarify, and help guide thematic development. As such, we believe the analytical interpretations in this paper are a reliable reflection of participant comments.

3 FINDINGS AND DISCUSSION

Themes emerging from the focus group discussions are presented and discussed below. Quotations are provided to illustrate themes and related concepts. An identifier is used to indicate driver categories. For example, F>50 is a woman aged over 50, M25-50 is a man aged between 25 and 50 years, RareM44 is a 44-year-old man who self-identified as someone who rarely speeds, and ExcessiveF59 is a 59-year-old woman who self-identified as someone who speeds regularly by large amounts.

3.1 The influence of other people known to the driver

Participants spoke about the way their driving might be affected by people known to them, primarily family members and friends.

3.1.1 The presence of others in the car – 'passenger effects'

There was considerable agreement across most groups (even among those who self-identified as Excessive speeders) that having passengers in the car led to them driving more slowly. Slowing down appeared to be an intentional act in response to the presence of parents or friends (for the young driver groups), children or spouse (for mid and older groups), and work-related clients in the car. For example:

"With parents in the car, boyfriend's mum, or friends' parents, I will drive under the speed limit. I'm so careful about every move that I make." F<25

"I changed when I became a mother, wouldn't have mattered what age. I now had the most precious being in the world in my car, so it was morally wrong to jeopardise him [by speeding]*."* F25-50

"I always drive strictly to the speed limit when I've got a client in the car...they're very conscious of the speed, they know if you are speeding." ExcessiveM54

These discussions raise a number of themes. Firstly, the intentional act of driving more slowly with passengers can be viewed as a safety-related responsibility of a driver as well as a responsibility to be considerate of passenger comfort. For example:

"*My friends know that I speed, but they also know that when they get in the car with me, I'm not going to do anything stupid, I'm going to stick to the limits with them in there."* F<25

"My Mum would feel very uncomfortable if I was above speed limit…I'd be wanting to make my passengers feel comfortable for sure." M<25

In addition, there was evidence of driving more slowly to intentionally present the impression of being a driver who is concerned for the welfare of passengers. For example:

"Sometimes you want them to know that you are worrying about their safety…when you are travelling with parents, you don't want them to think that you're putting their lives in danger, especially if I'm taking my younger sister, or sometimes a girl." M<25

This concept could be viewed as a self-presentational motive. Drivers desiring to be viewed as responsible and thoughtful of the needs of others may promote that image by intentionally reducing their speed when carrying passengers (Schlenker & Pontari, 2000). This issue is discussed further in Section 3.3.1.

In contrast to this willing behaviour modification, there was evidence that young men appear to drive more slowly with parents in the car only to appease their requests to drive safely. For instance:

M<25: *"Mum said 'You can drive the Commodore, big V6, but don't speed, I'll be disappointed in you… if I find out you've sped'. It didn't really affect* [me] *that much".*

Fac: *Is your driving different when she's in the car with you?*

M<25*: "Oh hell yeah!"*

These comments illustrate another theme: parental concern about, and attempts to influence the safety of young people's driving, even when not actually in the car. This theme is also discussed further in section 3.3.1 with respect to social reinforcements associated with speeding.

In contrast to the 'passenger effect' described above where participants reported driving more slowly with passengers, discussions by younger and older men and Excessive speeders provided evidence of situations that reflect the opposite. For example, an older man reported that his spouse tries (apparently unsuccessfully) to convince him to slow down " *yeah, she* [wife] *tries to influence me, but I've got a deaf ear*", and an Excessive speeder (F59) noted that "*when the kids are in the car, I tend to speed"*. Young men were the only participants to consistently indicate a willingness to increase driving speeds with friends in the car:

"*If I have my friends in my car, I feel inclined to maybe, not speed or hoon exactly, but I don't really want them to think that I'm a really slow driver or a granny driver or whatever. But if I had my parents in my car, then I'd be going really sort of granny driving I guess, keeping to everything* [complying with all speed limits]*."* M<25

This finding is consistent with the large body of literature that underpins passenger restrictions in many graduated driving licensing schemes (Keall, Frith, & Patterson, 2004; Lam, Norton, Woodward, Connor, & Ameratunga, 2003; Preusser & Tison, 2007; Regan & Mitsopoulos, 2001; Simons-Morton, Lerner, & Singer, 2005; Thomas et al., 2007). It also underscores the intent of a novel approach to anti-speeding campaigns in Australia recently. The '*Pinkie*' campaign, with its '*Speeding. No one thinks big of you*' caption, aimed to recast the way that

speeding is viewed by the community and by young men in particular. The campaign aims to convince young men that speeding is seen as socially unacceptable by the community and, more importantly, by their peers, thereby undermining anticipated rewards of peer acceptance for speeding. The tag line highlights the concept that speeding drivers will not be seen as cool and will not be praised or admired for their behaviour. In addition, the campaign promotes the notion that all community members can take ownership of the problem of risky driving by giving feedback that speeding is not acceptable. This feedback takes the form of a gesture shown to the speeding driver by pedestrians and peer passengers (see Watsford, 2008 for a detailed description of the campaign). This campaign deliberately deviated from the traditional crash and apprehension risk messages, opting instead to emphasise the socially-based message of negative social feedback from peers and others. Early evaluations indicate success in reaching the target audience, however, long term impact is yet to be clearly demonstrated (Watsford, 2008). Nevertheless, this presents an important step forward in addressing speeding among groups that have rejected traditional anti-speeding messages.

3.1.2 The absence of others in the car

As noted above, the presence of others in the car was widely reported (with some exceptions) to decrease driving speeds. This finding suggests, therefore, that the absence of passengers may make people drive faster. While no specific questioning about this occurred, drivers in all but the Rare speeding groups explicitly stated that they were different drivers when driving alone with terms such as '*reckless*' and '*rally car driver*' used by young women to describe their solo driving. Largely, the expression of driving faster when alone was linked to the concept of only being responsible for injuring oneself in the event of something going wrong. For example:

"*When you've got someone else with you, you could hurt them as well. If you've got just yourself, you know, you're just in control, and you won't be held responsible if anything happens to anyone else. You're responsible for what happens to you, not to anyone else.*" ExcessiveF18

"I drive differently if I've got people in the car…I always walk out of something I wreck, but I can't guarantee somebody else is going to. I can walk away from wrecks, but I don't know about being responsible for others." M>50

"I don't speed when there are other people in the car, 'cause it's risking other lives then." F>50

These comments suggest a number of things. Firstly, there appears to be a perception of invincibility in relation to personal safety associated with speeding. Secondly, they suggest that one's own safety is considered differently to the safety of others. Thirdly, they give the impression that in the event of a crash when driving solo, little thought is given to other road users who may be involved. It is as if solo speeding is perceived as being done in isolation from all others who share the road ("*I just wouldn't want to put anyone else in a situation I might put myself into*" F<25). These findings are consistent with previous research (Fuller et al., 2007; Thomas et al., 2007) and will be discussed later in the paper.

3.1.3 Using known others as role models

The role of the behavioural dimension of SLT's *Differential association* was evident in the transcripts. Younger participants, in particular, gave examples of how their driving has been influenced by their perceptions of other people's driving, particularly parents. Note that these other people are not necessarily in the car but nevertheless, exert an influence. For example:

"*My parents do* [speed]. *I know how they drive, and you look up to them and think they're good people, so it's* [speeding] *not a huge deal really."* F<25

"Dad drives faster than Mum. Growing up, we'd hop in the car… I guess that, I just assume males drive faster." M<25

Imitation, the SLT component relating to the process of copying others' behaviour was also evident. Specifically, young drivers gave examples of how observing a parent speeding has influenced their approach to exceeding speed limits. The comment below was part of a discussion about the use of speed alerts to warn when you exceed the speed limit.

"*Our family car* [has a speed alert device]. *Dad straight away set it up to 120* [km/hour]. *I was going to the coast on a trip one day, early in the morning, and thought, 'yep* [I'll switch it] *off'."* M<25

In this instance, the participant described copying his father's non-compliance with the speed limit, rather than copying use of the speed alert. It appears that this young driver did not perceive the speed alert as something to help him comply with the 100 km/hour speed limit because he has observed his father deliberately setting the speed alarm well above this limit, presumably with the intention of driving at up to 120 km/hour.

It is impossible to directly deduce from these comments what parents think about the speeding behaviour of their children. However, there was evidence from the discussions of young women to suggest that in some cases, parents exceed speed limits but expect, and articulate, that their children will not. This practice offers mixed messages to young drivers.

"I've got 2 speeding tickets and my parents don't know about them. [If they did], *I'd probably get a good talking to, even though I'm 24, I'd probably still get a lecture* [from] *my father…he drives like a maniac."* F<25

"*They* [parents] *say, 'Go 20* [kms] *under the speed'* [limit]*...every time I hop in the car, they say, 'Be careful driving', which is kind of hypocritical because they always go over, so it's like a complete different story when it comes to me."* F<25

By contrast, and less commonly, other young drivers, particularly females, provided examples of the influence of *differential association's* normative dimension through espoused family norms of adhering to speed limits: "*we always keep to speed.*" F<25

3.1.4 Other people known to the driver who have been involved in a crash

Having had friends killed by or involved in car crashes was discussed only by young females (including young female Excessive speeders). These experiences were noted as having the effect of always slowing down at the location of the crash.

"*Even though the mourning had stopped after a while, every single time we go past that spot, even though it's a 100* [km/hr zone], *we still go 70* [km/hour] *around that corner.*" ExcessiveF19

A more general, cautious effect on driving and a recognition that the event was frequently in conscious thought was also expressed:

"*At high school we had two deaths…people who were speeding. I'm from a small town, so it was a really big thing. That, literally, plays through my mind every single time I'm in the car.*" F<25

3.2 The influence of other people unknown to the driver

Each group made reference to the influence of other drivers in a number of ways including keeping up with the speed of other traffic and perceived pressure from drivers behind them to speed up. Examples of these views are provided below.

3.2.1 Driving speeds in comparison to others

Keeping up with the flow of traffic on the road was nominated by all groups except Rare speeders as a regular part of their driving. Irrespective of the posted speed limit, participants reported using the speed of surrounding traffic to gauge how fast to drive.

"How the traffic is flowing is an influence to how I drive. Just keeping it flowing. I guess I'm too busy watching what's going on around me and I don't even look at my speedo, so I'm actually using the driver in front of me as my gauge." M>50

"You often find yourself out on the motorway, you're cruising along behind other cars, and you're keeping up with them, and you look at the speedo and you're up to 120 [km/hour in a 100km/hour zone] *and you don't know it."* F>50

Additionally, comments from participants in the young male and Excessive speeders groups suggest that drivers may voluntarily increase their speed when they encounter anonymous others on the road whom they wish to race or beat in some way. For example, a young man described the situation where another car approached from behind which led him to increase his speed.

"I know there's been a few cases where I've been in a mate's car…a really nice car, it's pretty done up, modified a bit, and then another sort of hoon's come up behind ya… and nobody else is on the road late at night, it depends who you're around basically. I'd speed then." M<25

Similarly, an Excessive speeder expressed her delight when driving faster than others: *"I love the fact that I can see a really nice car beside me, and then my little* [car] *can go, and it's just like, 'yeah, well you've got nothing'. I love that feeling."* ExcessiveF19

3.2.2 Perceived pressure from others to drive faster

Perceived pressure from other drivers to speed up was commonly discussed in all groups. Two general responses to this pressure were evident. Firstly, the perceived pressure was described in ways that conveyed a sense of ease with the 'necessity' to speed up. For example:

"Once I get out on the highway I will do 120, 130 [km/hour]. *It's safe, and you're sitting in amongst everybody else. You can't really sit on 100* [the posted speed limit] *on that highway any more, can you? It's 4 lanes. Because the flow is just too fast… you've got to go 110 or faster,* [or] *you are just sort of sitting there."* F>50

Secondly, responses, primarily from females, indicated varying degrees of discomfort at perceived pressure from other drivers to speed. When questioned further, common responses about the ways that other drivers exert such pressure included tailgating and flashing their headlights which were viewed by participants as signs that the other person was impatient and likely to do something dangerous in order to overtake them. The following quote captures this:

"I had 5 cars behind me, one who sat on my back. I'm not as confident as I used to be, and I was quite nervous …on my tail, and they're saying "hurry up, hurry up". If I'm driving along, and I've got to make a quick decision, they're too close to me, and I'm frightened there'd be an accident." F>50

For those participants who appear not to increase their speed in the presence of this perceived pressure, two general responses were identified. The first response was one of pulling over to allow the other driver/s to overtake, thereby relieving the perceived pressure. This response was typically discussed by mid-age and older women including female Rare speeders. For example:

"If I don't know the road, I'm slower, and they are tailgating. I have been known to pull over and let them go. You know, if you are trying to find something, and you know that you are going to have to

brake at the last moment, I can't stand the added pressure of having the person who's going to go up my tail, so I pull off and let them go." F25-50

"…young people, pushing me along, I've pulled over." F>50

The second response to perceived pressure was more defiant. It was typically expressed by Rare speeders and mid-age females and indicated a level of resentment at pressure from others to alter their legal driving to cater to the needs of those who are breaking the law.

"I felt like making a bumper sticker that says: 'oh sorry to be in your way, I'll just get out of your way so you can speed' (sarcastically). *We all get out of the way quickly because there's somebody coming who wants to speed, and their speeding is obviously more important* [than my safety]*."* F25-50

"Why should I respect people who are willing to risk my life? I've always wanted to ask people why they think their need to speed is worth more than my safety." RareM37

Furthermore, pulling over was seen as catering to those who wish to break the law, thereby sending the wrong message about speeding. This sentiment was strongly expressed, particularly by Rare speeders. In this instance, the act of pulling over to clear the path for others to speed was seen as likely to be misconstrued as acceptance of speeding as legitimate. The following quote sums up this concept:

"I don't see the need to pander to others. If they are stuck behind me, too bad. I've got just as much right to be on the road today as they have so I maintain my pace, doing the legal speed." RareM39

However, in contrast to the views relating to perceived pressure, there was also evidence of a firm denial of any influence from other drivers to speed: " '*The car behind me makes me drive*

fast'…what a load of rubbish! How dare they suggest someone else is in control of how fast they drive." RareM47

In summary, there were mixed views about how others exert influence on driving speeds. Discussion will now turn to reinforcements associated with speeding.

3.3 Reinforcement associated with speeding

This section describes participant statements that were interpreted as relating to *Differential reinforcement* – the SLT component regarding perceptions about actual and anticipated punishments and rewards associated with behavioural performance. As the focus of this paper is the influence of others, this section primarily concentrates on social punishments and rewards associated with speeding. However, for illustrative and comparison purposes, non-social reinforcements are also briefly discussed.

In an effort to explore social reinforcers (actual or anticipated) associated with apprehension, participants were asked whether they would be embarrassed to tell others if they were caught speeding and received a speeding ticket. Participants appeared to have little difficulty imagining a situation where they would disclose that they had received a speeding ticket, and some clearly based their responses on prior experience. Three main themes emerged from responses: an embarrassment dichotomy, breaching trust of others, and projecting the image of a responsible/safe driver. Often, these themes intertwined.

3.3.1 Social punishments associated with speeding

A common response to the question about embarrassment associated with apprehension for speeding was an immediate expression of likely embarrassment if anyone knew they had received a speeding ticket. There were instances where women of all ages stated that when they had received tickets in the past, they had hidden them from a spouse, parents, or children to

avoid embarrassment. Additionally, young males and young and mid-age females expressed embarrassment at having to tell their parents, and, to a lesser extent, their friends (young female groups only) because this was seen as likely to be disappointing other people.

"I don't want to get a fine, because I know that would disappoint my parents…I wouldn't want to have to show them." F<25

"*Probably, I would tell them* [parents], *but it wouldn't sit comfortably, I would feel as though I was disappointing them. They are toeing-the-line, sticking-to-the-limit type people."* F25-50

The embarrassment of having to tell others about a speeding ticket was associated with being perceived as an unreliable or unsafe driver, particularly for women. This finding was commonly linked to breaching the trust that others placed in them, particularly those who ride with them.

"I wouldn't want to go and tell people that I got a fine for speeding, particularly if they get in the car with me and then they're unsure, I just don't want that. F<25

Additionally, young women anticipated embarrassment if the parents of their friends knew they had received a speeding ticket. The following exchange demonstrates this:

Speaker 1: *"I wouldn't tell my friends for fear they'd joke about it to their parents."*

Speaker 2: "*Oh yeah, that's a big one."*

Speaker 1: *"Because if it was reversed, and you told your Mum that your friend's speeding…"*

Speaker 2: "*Yeah, I'd rather tell my parents than a friend's parents. You wouldn't really have respect from your friend's parents."* F<25

This exchange demonstrates the potential effect of the anticipated loss of respect and trust from authority figures such as one's own parents and the parents of peers. There was also an example

of loss of respect from having work colleagues learn of a speeding infringement that seemed associated with anticipated loss of standing as a respectable and law abiding citizen for one mid-age woman:

> "[I'd be embarrassed to tell] *most people. I can't imagine being prepared to disclose that* [a speeding ticket] *to just anybody. I'd probably tell [*my partner*] and he would just laugh, but I certainly wouldn't disclose it, for example, to anyone at work."*
>
> Fac: *"Your work colleagues would think speeding is bad, is that why you'd be embarrassed to tell them?"*
>
> *"No, I think it is more about wanting to create an impression of myself as a respectable person."* F25-50

These situations can again be viewed from the perspective of self-presentation (Schlenker & Pontari, 2000). Deliberate non-disclosure of a speeding ticket can be viewed as an attempt to project the image of a safe, trustworthy, and responsible driver, thereby avoiding the anticipated negative consequences such as loss of respect and, perhaps, potential future restrictions on being allowed to chauffeur peers.

Commonly reported by young drivers, the concept of trust also extended to the use of cars owned by others: *"People trust me to drive their own cars because I don't have my own. So I wouldn't want to break their trust. I'd be way* [very] *embarrassed to tell anyone."* F<25

In contrast to the 'social discomfort' illustrated above, there was evidence of a distinct lack of embarrassment associated with receiving speeding tickets, most notably among Excessive speeders as well as young and mid-age drivers. This finding might be explained by familiarity.

For instance: *"I'm never embarrassed to tell anyone, and I never ever flinch when I get a ticket, because I've had that many… hundreds of them."* (ExcesiveM54). People reported that they would "*laugh about it"* (F<25); others thought that tickets were a non-issue because speeding was *"just not hugely unacceptable"* (M<25). One person described speeding tickets as *"just one of those occupational hazards in getting from A to B."* (M25-50). This view was echoed by Excessive speeders who described receiving tickets as commonplace: *"an everyday thing now"* (ExcessiveM27).

Similarly, there was evidence to suggest that not all parents of young drivers would be disappointed if they discovered their children had been speeding, but would *"just expect me to deal with it."* (F<25). This finding suggests that speeding may not be seen as inappropriate by these parents. Furthermore, it was noted that a speeding ticket might only create an embarrassing situation if it led to licence loss:

"*The first one* [ticket], *nah* [not embarrassing], *the second one, maybe. The third one, when you've got no licence, I'd be absolutely mortified to say to my wife and young daughter, I can't drive anywhere anymore, I've just lost my licence."* M25-50

This response suggests that for some, the act of speeding is not viewed as wrong but that the consequences of multiple infringements would bring social disapproval.

3.3.2 Non-social punishment associated with speeding

As noted above, Excessive speeders commonly reported a lack of embarrassment associated with speeding tickets. However, this group, as well as older males and older females did express non-social punishments such as frustration and annoyance at losing demerit points and/or having to pay a monetary fine.

"*…being financially distressed."* Male>50

"*Not embarrassed, just frustrating, having to pay out money*." Female>50

Before the commencement of each focus group, participants were asked to report the number of speeding tickets received in the last three years. It was clear that, despite the 'financial discomfort' described above, monetary fines do not appear to deter some drivers from continuing to speed. As discussed elsewhere, demerit point sanctions also fail to deter some people and, in some cases, were linked to reports of fraudulent demerit point use to avoid licence loss (see Fleiter, Lennon, & Watson, 2007),

3.3.3 Social rewards associated with speeding

Encouragingly, examples of overt social rewards such as praise for speeding were rare. One young female participant described positive peer feedback for speeding relating to when she first started driving: "*I used to go driving with a few friends and when I was driving, it was a fun thing. It was in the bush and they'd say 'Go faster, go faster', so we were encouraged to speed if we were driving with our friends."* F<25

Additionally, an Excessive speeder described a situation that he anticipated his friends would find amusing. This exchange with the facilitator demonstrates the point:

ExcessiveM27: "*My mate's Dad got done for 160 in a 60* [km/hour] *zone on his bike."*

Fac: "*Was he embarrassed?"*

ExcessiveM27: "*No, he told everyone."*

Fac: *"If you were booked doing 160 in a 60 zone in your car, would you tell people?"*

ExcessiveM27: "*Yeah, wouldn't bother me I guess…yeah, I would tell people. People would just go 'What?!, yeah, ha ha.'"*

Fac: "*Would they think it was funny?"*

ExcessiveM27: "*Yeah, I reckon the boys* [male friends] *would."* ExcessiveM27

Older women made the only other references to positive feedback for speeding. However, these were more indirect because they related to observations about the behaviour of their sons: *"The temptation to speed comes from other kids egging them on to take a risk."* F>50. It is noteworthy that this issue was not actually reported by young men.

3.3.4 Non-social rewards associated with speeding

Examples of non-social rewards gained from speeding were identified, particularly by Excessive speeders. For example, one participant described difficulty complying with speed limits because of *"that adrenaline surge…I feel so much better when I'm speeding"* (ExcessiveF46). Another described speeding as *"an addiction I reckon, I love it, I really do"* (ExcessiveF19) while for another, *"part of it* [speeding] *is relaxation actually* (ExcessiveF59).

These findings are not surprising, given the body of literature describing the link between personality traits such as risk propensity and sensation seeking with risky driving behaviours like speeding. Those who seek high levels of thrill or stimulation are likely to be stimulated in a positive way by fast driving (Zuckerman, 2007).

4 GENERAL DISCUSSION

This paper reported findings from a qualitative examination of speeding from a social learning perspective to enhance our understanding of social influences on speeding in an Australian context. Historically, attempts to reduce speeding have primarily involved legal sanctions. High levels of enforcement conducted in countries such as Australia could be expected to bring high

levels of compliance. However, speeding seems to retain a 'special status' as relatively socially acceptable. Therefore, alternative avenues beyond legal sanctions are worthy of exploration.

Two types of influential others were identified in the current study: those known to the driver (passengers and parents), and those not known personally, but who share the road. With the exceptions noted earlier, passengers were generally described as influencing the driver towards slower driving speeds. A key finding was an expressed responsibility for the safety of passengers and a consideration for passenger comfort, manifested as a conscious and willing reduction in speed. This finding is consistent with previous research covering a broad age range of drivers (Hatfield & Job, 2006; Regan & Mitsopoulos, 2001). Our findings extend this concept by identifying the notion of drivers wishing others to view them as considerate and responsible.

Projecting such an image can be viewed from a self-presentational perspective (Schlenker & Pontari, 2000). In the current study, young drivers and women expressed the desire to be viewed as responsible and trustworthy. Furthermore, it appears that such impressions could be jeopardised if receipt of a speeding ticket became known to others. This finding highlights the relevance of social reinforcements to speed management. Embarrassment associated with receipt of a speeding ticket represents anticipated social disapproval from others. It is possible that those who reported concealing speeding tickets, did so to avoid self-presentational failures, thereby escaping social disapproval (Leary et al., 1999). Importantly though, having others learn of speeding offences did not lead to expectations of negative social consequences for all participants. In the same way that legal sanctions appear not to deter some drivers, social sanctions may inhibit speeding only among those who view social disapproval as important or

relevant to them. As discussed earlier, negative social feedback has been identified as important in reducing drink driving (Grasmick et al., 1993) although the impact of social sanctions does appear less influential on recidivists, at least with respect to drink drivers (Freeman et al., 2006). Changing community perceptions about the social acceptability of speeding may realise similar results. Those who currently speed excessively, or who view social sanctions for speeding as irrelevant are potentially less likely to respond to altered community norms than are drivers who 'fear' social sanctions (Fylan et al., 2006). However, this does not mean that we should not continue to advance the notion of social disapproval of speeding.

Speeding when alone was generally viewed as more acceptable than when carrying passengers. Importantly, the view that solo speeding is acceptable was expressed not just by the traditional high risk drivers (i.e., excessive speeders, young men). In general, a different level of risk appears acceptable for self than for others. This belief may stem from individuals' previous experiences of involvement in minor crashes that did not involve others. It may also indicate that those who increase their speed to 'reckless' levels when alone only do so when there is little or no traffic on the road. Another potential explanation was highlighted from interviews with young men about serious outcomes associated with crashing (see Falk & Montgomery, 2007). Consideration of crash outcomes did not elicit discussion about severe personal harm but about vehicle damage, minor injury to self, and about 'being protected by the vehicle' (p. 422). One explanation of beliefs such as these, including those expressed in our study where drivers thought they would survive a high-speed crash, is that of the 'car-coon'. This term has been used to describe the phenomenon of modern cars offering a comfortable shell that reduces road noise and dulls the appreciation of real speed and crash risk (Silcock, Smith, Knox, & Beuret, 2000).

Our findings extend this concept by illustrating that the consequences of solo speeding are regarded as unrelated to the ability to cause harm to people outside the vehicle. Efforts to dispel such beliefs and promote the concept of shared responsibility for safe road use are recommended. The concept of sharing the road with others, even if not sharing the car with others, may assist in this regard.

4.1 Implications for speed management

Our findings highlight a number of important concerns for speed management strategies. Firstly, the potential for parental influence is clear. Younger drivers openly discussed modelling their parents' driving and gave explicit examples of imitating their speeding behaviour. Encouragingly, there were also examples of family norms that promoted speed limit compliance. Parental behaviours and attitudes are key components of social learning theory with families identified as the primary socialising influence (see Akers, 1998). The role of parents in promoting safer driving deserves greater attention. Raising awareness of the importance of modelling responsible driving for younger people should be tackled.

Parental involvement in learning to drive is increasingly encouraged by authorities via graduated driver licensing scheme supervision requirements. Our results highlight the mixed messages that parents can send to their children by doing one thing (i.e., speeding) and saying another (i.e., you should not speed). Focusing parental attention on the importance of modeling appropriate driving behaviours is recommended. Previous research has demonstrated a familial link between child and parental driving styles (Taubman-Ben-Ari, Mikulincer, & Gillath, 2005). As such, future anti-speeding campaigns could advance the idea that impressionable people are watching and may copy what they observe. This theme has been adopted in a recent public health

campaign in Australia that is underpinned by a large body of evidence demonstrating familial influences on alcohol use (Barnes, 1990; Chalder, Elgar, & Bennett, 2006; Conger & Reuter, 1996). The '*Kids absorb your drinking*' campaign portrays generational transmission of drinking norms within one family and aims to inform parents of their role in modelling appropriate alcohol consumption to their children (DrinkWise, 2008). Similar themes could be explored in road safety campaigns to evaluate the effectiveness of such measures in that context.

Secondly, self-presentational goals appear to have a place in managing speeds, at least for some drivers. Wanting to be known as a responsible, considerate, and/or trustworthy driver is something that should be encouraged. This concurs with previous calls for greater emphasis on enhancing young drivers' self-image as responsible and considerate and on reinforcing positive values such as personal responsibility for self and others in preventive efforts (Taubman-Ben-Ari, 2008). Our findings extend this call beyond its relevance only to younger drivers because this issue also seemed particularly relevant to women in all age groups. In the past, the broader community has been encouraged to take responsibility for the safety of others by not allowing people to drive while intoxicated. Designated driver programs promote the concept of one person in a group remaining sober in order to drive friends home safely and encouraging active persuasion of intoxicated friends not to drive (Nielson & Watson, 2009). Our findings suggest that this concept of shared responsibility for transporting self and others at safe driving speeds also has merit.

Thirdly, a perceived pressure from other drivers was discussed by all groups. This pressure was described as uncomfortable and intimidating by some participants and was reportedly relieved by

pulling over. Interestingly however, the act of pulling over was viewed by others as counterproductive to promoting safe road use because such action was viewed as sending the message that speeding is legitimate. These drivers appeared defiant in the face of pressure from others to speed up, stating their intentions not to 'give in' to such pressure. Experiencing pressure from other drivers that is difficult to resist has been previously described in terms of relinquishing some of the driving autonomy to another (Aberg et al., 1997; Forward, 2006). Our findings extend the understanding of the concept of perceived pressure to speed by considering the perspective of those drivers who do not submit to it. These drivers appear to feel that they remain in control of their driving, and further, question why someone else's "need to speed" is accepted by the driving community at large as more important than the safety of others. The concept of an individual's 'right' to speed versus a collective safety environment could be employed to extend the shared driving responsibility argument outlined above. Our findings suggest this area warrants further investigation. They also support continued applications of social learning theory to driver behaviour because of the breadth of social mechanisms encompassed by the theory including normative, behavioural, and reinforcement concepts.

Several limitations of the current research are noted. This work was intentionally exploratory in nature. This places limitations on the conclusions that can be drawn. However, the broad range of driver types in the sample provides a strong foundation for comparative conclusions. The group environment may result in a restriction of individual opinion due to the pressure of group consensus (Nagy Hesse-Biber & Leavy, 2006). However, previously reported community tolerance of exceeding speed limits in Australia suggested that most people would not view speeding as a sensitive topic (Pennay, 2006). Furthermore, groups were intentionally structured

to contain the same driver type to encourage discussion among people with similar beliefs. Encouragingly, while consensus within groups was common, individuals openly expressed opposing opinions on many occasions, adding a level of richness to discussions and indicating an understanding by participants that they were free to express views without sanction.

However, the group setting could have provided an opportunity for participants to embellish their responses in order to present a particular impression. We acknowledge this possibility, but point to the earlier discussion about the fundamental role of self-presentation in social psychological research (Schlenker & Pontari, 2000). If self-presentation is indeed a legitimate concern for some drivers, then there is every reason to expect that it might also be influential when they discuss their driving in a group setting. There may actually be little difference between wanting to present as a responsible, reckless, or trustworthy driver to passengers and wanting to present that way to others in the social research setting. In this sense, the nature of self-presentation suggests that drivers are likely to discuss their driving in a manner that is consistent with their reported behaviour and without embellishment.

In conclusion, our findings indicate that we should not underestimate the power of social influence on speeding. Role modelling, attitudinal influences, and social reinforcements all appear relevant to speeding in the Australian context. As such, there is scope to exploit the use of social sanctions for speeding and social praise for speed limit compliance and responsible driving in future interventions.

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Appendix A

Composition of driver groups

Group	Mean Age	SD (years)	Age Range	n
Females <25 years	19.3	2.2	17-24	18
Males <25 years	19.6	2.7	17-24	7
Females 25-50 years	42.5	4.0	35-47	6
Males 25-50 years	37.5	5.0	32-45	4
Females >50 years	60.8	3.7	55-64	6
Males >50 years	64.3	7.1	56-73	4
Speed Excessively (2 male, 10 female)	34.3	14.7	18-59	12
Speed Rarely (5 male, 5 female)	46.4	18.0	26-77	10

Appendix B

Focus group questions and probes

Topic	Questions & Probes (probes in italics)
Personal definition of 'speeding'	What do you consider to be speeding and why? Generally, how frequently do you drive over the posted limit?
Complying with speed limits	Do you think it's easy to comply with speed limits? *Why/ why not? What makes it easy/hard?*
Social influences	Who or what influences your driving speed? *How?* Who would you be embarrassed to tell if you were caught speeding? *Why?*